
Healthcare in Transition: Where Patient Choices and Satisfaction Drive Success

Submitted 24/06/24, 1st revision 10/07/24, 2nd revision 25/08/24, accepted 30/09/24

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Abstract:

Purpose: The healthcare sector, especially in Kerala, is experiencing significant transformations driven by escalating patient expectations. Patient satisfaction has become a cornerstone of healthcare quality assessment, influencing clinical effectiveness profoundly. Modern private hospitals in Kerala have embraced technological advancements to elevate service standards and compete fiercely.

Design/Methodology/Approach: A study in Thrissur examines patient satisfaction in private medical colleges, revealing preferences among male patients aged 41-60 with higher incomes and education levels. They prioritize timely service, cleanliness, and accurate diagnosis. Variables like length of stay, career, marital status, and education shape patient perceptions. Empirical methods, including statistical analysis, elucidate these findings, highlighting the evolving dynamics of patient expectations and healthcare delivery in Kerala.

Findings: Research underscores patient satisfaction, disease severity, treatment protocols, and outcomes as critical quality indicators.

Practical Implications: Despite Kerala's robust healthcare infrastructure, retaining skilled professionals poses challenges due to migration trends. Thrissur emerges as a pivotal healthcare hub, fostering infrastructure growth.

Originality/Value: Patients now demand superior services alongside medical care, leading to dilemmas in choosing between public and private healthcare facilities.

Keywords: Private Hospitals, Healthcare Quality, Service Standards, Patient Satisfaction, Patient Expectations, Technological Advancements.

JEL Classification: I11, I18, L84, D12, L15.

Paper type: Research article.

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1. Introduction

The healthcare industry has undergone significant transformation to meet the growing demands of the global patient population. Patient perceptions and happiness are increasingly important factors in determining healthcare quality. Modern private hospitals have evolved with advancements in technology and new treatment methods, ensuring high-quality services.

The competition among hospitals has led to efforts to provide satisfied patient service quality through trust and reputation in society. Kerala, a highly educated state with well-equipped government and private hospitals, has the best service quality compared to other Indian states. The Kerala Model of Health Management is well-known worldwide, with numerous medical colleges, dental colleges, pharmacy colleges, and nursing institutes in both public and private sectors.

Thrissur, known as "the heartland of Kerala," is home to many successful industrialists and investors, making it India's "Golden City." Kute *et al.* (2022) the rapid development of IoT and AI technologies has led to the rise of medical applications in the healthcare sector, particularly in medical diagnostics. Traditional diagnostics require in-depth analysis of patient symptoms, genetic history, and environmental conditions (Kuzmina *et al.*, 2023).

The advent of IoT and deep learning has transformed conventional diagnostics into automated decision-making systems powered by machine learning. Nair *et al.* (2021) Kerala's Urban Primary Health Centres (UPHCs) have seen a significant improvement in utilization, with over 4 lacky people annually screened for NCDs, and 88% of patients are satisfied with their services, influenced by factors like location and frequency.

Beny Paul (2019) claims that the health tourism sector in India is growing rapidly, offering a diverse range of experiences including business, leisure, culture, adventure, spirituality, eco-tourism, sport tourism, and religious tourism. This paper aims to study customer satisfaction levels with Ayurveda, a key element of health tourism.

Sharma *et al.* (2021) a study in central India found satisfaction among COVID-19 positive patients in a tertiary care hospital, with 91.3% recommending the hospital. Improvements include improved facilities, telephone counseling, and periodic surveys. Saravanabavan *et al.* (2023) the spatial distribution of primary health care centers in Madurai district, analyze the socio-economic conditions of patients, and analyze patient perception and satisfaction levels.

Data was collected from primary and secondary sources, with 260 respondents interviewed using questionnaires. Spatial analysis techniques were applied to

identify health service areas, and detailed fieldwork was conducted to study socio-economic characteristics and utilization patterns.

Sundaram *et al.* (2021) examines team dynamics in a Kerala cancer hospital, revealing communication breakdowns and role ambiguity as challenges. Successful practices include structured protocols, regular training, and collaborative leadership. Stakeholders suggest targeted interventions to improve performance and patient care quality, contributing to societal well-being.

Puthanveetil *et al.* (2021) study examines the relationship between total quality management (TQM) practices and organizational performance in Indian hospitals. It identifies top management initiatives, continuous process improvement, and teamwork as key factors. However, staff awareness and customer focus remain lacking.

Gupta *et al.* (2023) study examines the India's healthcare system which is unequal globally, with family medicine playing a crucial role in addressing health disparities. Family physicians can strengthen primary care by providing comprehensive services, training, capacity building, and resource access.

Dang *et al.* (2019) refer to the rapid growth of the Internet of Things (IoT) which has led to the need for data analysis and storage platforms like cloud computing and fog computing. Healthcare is a key application domain, improving patient safety, staff satisfaction, and operational efficiency. This survey analyzes IoT components, applications, and market trends in healthcare since 2015, focusing on technologies like cloud computing, ambient assisted living, big data, and wearable's. It also reviews privacy and security issues from a healthcare perspective.

2. Literature Review

Al-Damen (2017) study titled "Health Care Service Quality and Its Impact on Patient Satisfaction: Case of Al-Bashir Hospital", with a sample size of 448 outpatients as respondents results that there is an influence of professed service eminence on total patient approval. Additionally, the reliability is more important than the empathy and assurance.

Ayala, Liomary, Principe, Ortega, and Rosaliz (2017) in their study titled "Effects health service quality: a comparative study in public hospitals vs. private hospitals in Puerto" aimed to measure the relationship between the Tangibles, Safety, Accountability, Reliability, Empathy with the satisfaction of clients between the hospitals in Puerto Rico.

The sample size was consisting of 203 respondents. The findings of the study revealed that there is a positive relationship between the standard services and the satisfaction and there is significant disparity between the standard of services among

these two types of hospitals. In addition to that, the study revealed that the private hospitals provide better satisfaction to their clients.

Cunha and Sweta Pam (2017) in their study titled “Evaluation of service quality and its effect on patient satisfaction and Behavioral Intentions a study of public and private Hospitals in Dakshina Kannada district” had conducted to appraise the service quality among the public and private hospitals. Multi-stage sampling technique was applied. The sample size was 625 respondents. The results of the analysis revealed that the all variables are positively significant to the patient perception and experience in private hospitals.

Goshist *et al.* (2017) in their study titled “The patient satisfaction at a tertiary care hospital in Malwa region of Punjab” intended to examine the level of patient fulfillment. The structured inventory was administered among 890 in-patients. Illiterate patients were interviewed personally. Majority were responded that the stretcher availability and behavior of paramedical staff in emergency as poor more.

Most patients rated the services of the hospital as good but still they opined that were unclean toilets, wards, canteen and behaviors of paramedical staff. Hercos and Berezovsky (2017) in their study titled “Quality of the ophthalmological service to outpatients of the public and private healthcare systems” carried out among 200 patients in Brazil. Their paper shown that as per service quality dimensions public hospitals were appreciably greater than the private healthcare segment.

Kalutharawithana and Jayawardena (2017) in their study titled “Quality towards Customer satisfaction in Private sector Hospitals- A Case Study on the ABC Private Hospital in Sri Lanka” aimed to increase their picture by modifying the present service levels. The data were collected through stratified random sampling and the sample size was 100. The analysis of the study revealed that the Patient’s approval and has an encouraging association in accordance with complete variables of service quality.

Kumar (2017) in his study titled “Patients’ perspective about health care service quality in private hospitals in Punjab” aimed to check the quality of service provided by the clinic service centres. The number of respondents was 400. The study made known that the certified private hospitals carry better services while comparing to non-recognized private hospitals.

Additionally, the results showed that the patients’ satisfaction and patients’ loyalty has positive association. Neupane, Ramesh, and Devkota (2017) in their study titled “Evaluation of the Impacts of Service Quality Dimensions on Customer Satisfaction: A Study of Private Hospitals in Nepal” with a sample size of 490 respondents have shown that all the extent of the service excellence is definitely related with patient satisfaction, and the total service excellence and patient contentment has a significant correlation.

Pathak (2017) in his study titled “An Analysis of Outpatients’ Perceived Service Quality and Satisfaction in Selected Private Hospitals of Kathmandu” aimed to study the total satisfaction of outpatients is on the basis of tangibles, openness, compassion, consistency and assertion. The findings of the study made known that the greater parts of the respondents were pleased with the overall quality of the hospitals and irrespective of personal profile and there is a strong positive correlation for all variables with overall satisfaction.

Wath, Makarand, and Agarwal (2017) in their study titled “A Study of Service Quality and Patient Satisfaction in Private Hospitals of North Maharashtra Region” aimed to measure the likely and supposed eminence of healthcare services. The sample of the study was 120 patients from 10 different private hospitals in the region. The study made known that the hospitals are unable to provide assurance at the expected level. All the dimensions are highly positive but lesser than the patient’s expectation.

Aiken *et al.* (2018) in their study titled “Patient satisfaction with hospital care and nurses in England: an observational study” have measured the anticipations of hospital customers among all the doctors and all levels of nurse staff. The results exposed that there is a strong negative association between the client’s perceptions on hospital care, that are connected with missed nurses, support, and care.

Fatima, Malik, and Shabbir (2018) in their study titled “Hospital Healthcare Service Quality, Patient Satisfaction and Loyalty: An Investigation in context of Private Healthcare Systems” found the importance of quality dimensions in expected satisfaction and fidelity among hospital clients. The sample size of the study was 611 respondents. The finding of the study depicts that privately owned hospitals are delivering enhanced healthcare services to the customers and the superior class of hospital services meant to make fulfillment and trustworthiness among the patients.

Javed and Ilyas (2018) in their study titled “Service quality and satisfaction in healthcare sector of Pakistan- the patients' expectations”, conducted among Pakistani hospitals, with a sample size of 459 respondents revealed that the customer happiness is strongly correlated to empathy in public owned and to receptiveness in the privately owned hospitals.

Karaca, Anita, Durna (2018) in their study titled “Patient satisfaction with the quality of nursing care” had a descriptive study with 635 participants. The respondents opined that their health as outstanding and admitted were more happy towards the nursing care based on the number of admissions happened. Their study revealed that the nurses were exhibiting a better amount of concern to the process of information sharing.

Khattar and Singn (2018) in their study titled “Service Quality in Private Hospitals in Delhi NCR: A SERVQUAL Analysis” aimed to measure the hospital variables of

service standard among the giant privately managed hospitals, Delhi NCR. The study analysis revealed that the private hospitals in Delhi NCR have the dimension of responsiveness and empathy the score is negative.

Lestariningsih, Hadiyati, and Astuti (2018) in their study titled “Study of Service Quality and Patient Satisfaction to Trust And Loyalty in Public Hospital, Indonesia” had conducted, with a sample of 100 respondents, that the patient satisfaction has positively impact on the loyalty of customer through their belief.

Qadri *et al.* (2018) in their study titled “An Assessment of Patients Satisfaction with Services Obtained from a Tertiary Care Hospital in Rural Haryana”, using a sample of 450 respondents have shown that the majority of the patients opined that they were enlightened with the services, client - clientele rapport, therapeutic care and support.

Raina, Shahid Hamid, and Bhat (2018) in their study titled “Healthcare service quality in private hospitals of India - an empirical assessment from Jammu and Kashmir State” have shown that there are significant disparities between the perceptions and anticipations of hospital customers for all the variables of service standard.

Rehman and Husnain (2018), in their study titled “The Impact of Service Quality Dimensions on Patient Satisfaction in the Private Health Sector Located in District Sargodha, Pakistan,” using a sample of 380 respondents, showed that infrastructural facilities, machinery and technology, and staff compassion toward patients constitute the service quality model that affects service standards.

Javed, Liu, Mahmoudi, and Nawaz (2019), in their study titled “Patient Satisfaction and Public and Private Sector Health Care Service Quality in Pakistan,” aimed to assess the overall relationship between customer satisfaction and various healthcare standards in Pakistan. The study highlights that trustworthiness and transparency are highly determining factors in patient satisfaction among hospitals.

Kwateng Kwame Owusu *et al.* (2019), in their study titled “Service Quality in Public and Private Hospitals: A Comparative Study on Patient Satisfaction,” conducted in Ghana with 400 respondents, found that privately run hospitals provide a higher level of customer support and care compared to publicly managed institutions.

Tan and Nya-Ling (2019), in their study titled “Measuring the Influence of Service Quality on Patient Satisfaction in Malaysia,” showed that a hospital’s reputation, patient well-being, staff quality, and social responsibility were the major factors influencing patient satisfaction.

Cho *et al.* (2020), in their study titled “Comparison of Patient Perceptions of Primary Care Quality Across Healthcare Facilities in Korea: A Cross-Sectional Study,” conducted with a sample of 5,748 respondents, found that primary health centers outperformed privately managed hospitals in initial patient contact, inclusiveness, individual care, and providing services where financial assistance and ambulance support were needed.

Choi *et al.* (2020) in their study titled “The Effects of Perceived Medical Service Quality on Patient Satisfaction, Hospital Reputation, and Loyalty” aimed to analyze the impact of patients' perceptions of medical service quality on their satisfaction, hospital reputation, and loyalty, providing strategic insights to improve hospital performance. The results indicated that the quality of medical service significantly influenced patient satisfaction and positively affected hospital reputation and loyalty.

Gaur, Jahnvi, and Thatkar (2020) in their study titled “Patient Satisfaction with Services at a Teaching Hospital in Port Blair: A Cross-Sectional Study” aimed to measure satisfaction levels among outpatients at medical college clinics in Port Blair. The sample comprised 500 respondents. The study found that most respondents were from urban areas and aged 30-39 years. Communication was the highest-rated factor contributing to satisfaction, followed by overall fulfillment, technological standards, doctor availability, social ethics, and finally, openness and convenience. The study suggested improvements in these areas to enhance service quality and make hospitals more patient-centered.

Perneger, Peytremann-Bridevaux, and Combescure (2020) in their study titled “Patient Satisfaction and Survey Response in 717 Hospital Surveys in Switzerland: A Cross-Sectional Study” was conducted through personal interactions with clients. The study revealed a positive correlation between patient satisfaction and response rates.

Mahfouz Mohammad Eid *et al.* (2021) in their study titled “Comparison of Patient Satisfaction Toward Healthcare Performance Between Government Hospitals and Private Hospitals” was conducted using a virtual survey method. The study found no significant differences between public and private hospitals. However, female respondents reported higher satisfaction levels compared to male respondents. Satisfaction with the conduct, manners, and communication of doctors and supporting staff was significantly higher in private hospitals compared to public healthcare institutions.

Sadeghi, Rahimi, Poornoroz, and Jahromi (2021) in their study titled “Patient Satisfaction with Hospital Services After the Implementation of the Health System” conducted among 556 hospital clients indicated that Peymaniya Hospital had higher patient satisfaction in nursing care. However, Motahari Hospital excelled in diet services, diagnostic services, billing and compensation, and overall management, leading to higher customer satisfaction compared to Peymaniya Hospital.

3. Methods and Materials

3.1 Problem Statement

It is well-known that healthcare facilities provide diagnoses and treatments, but patients expect more from these institutions. When seeking help from hospital staff, patients hope for high-quality service. The choice between public and private hospitals can be challenging for individuals.

Various studies have examined the quality of care in private healthcare facilities (Sadiq Sohail, 2003; Aliman and Mohamad, 2013) and assessed patient satisfaction with hospital services in both the public and private sectors (Manaf and Phang, 2009; Ahmad et al., 2011).

Patients are particularly concerned with the severity of their conditions, as well as the treatment process and outcomes. This study explores the factors influencing patients' preference for private hospitals over public ones, focusing on service quality and amenities such as technology and hygienic environments. It aims to identify the factors that drive patients to choose private hospitals and to highlight the differences between public and private hospitals, emphasizing the need to address these factors.

3.2 Scope of the Study

This study examines the impact of patient satisfaction on service quality in private medical colleges in the Thrissur district of Kerala. It reviews literature on the concepts and theories influencing service quality in private hospitals. Patient satisfaction is shaped by client perceptions and expectations of services, including their understanding and ability to pay.

Although hospitals have standard service policies based on accreditations, ratings, and competition, patient perceptions may differ. The study aims to understand the role of patient satisfaction in determining service quality in private medical colleges.

3.3 Significance of the Study

Patients in private hospitals expect high-quality care and satisfaction, regardless of treatment. Negative patient feelings can lead to dissatisfaction and hospital losses. Staff with strong interpersonal and social abilities should be welcomed and rewarded.

Hospitals are often visited for medical emergencies or health assessments. Factors such as technical services, personnel approach, attitude, and continuous skilled practices must be studied to improve service quality and address patient concerns.

3.4 Research Objective

The research objective is to assess the factors influencing patient satisfaction and service quality in private medical college hospitals, with the aim of identifying areas for improvement to enhance overall healthcare delivery.

3.5 Research Questions

The research questions of this study are the following:

- What are the key factors that influence patient satisfaction in private medical college hospitals?
- How does the quality of services provided by private medical college hospitals affect patient perceptions and satisfaction levels?
- What demographic factors (e.g., age, gender, income, education) significantly impact patient satisfaction in private medical college hospitals?
- How do patient expectations compare to their actual experiences in private medical college hospitals, and what gaps exist in service quality?

3.6 Research Hypotheses

The research hypotheses are the following:

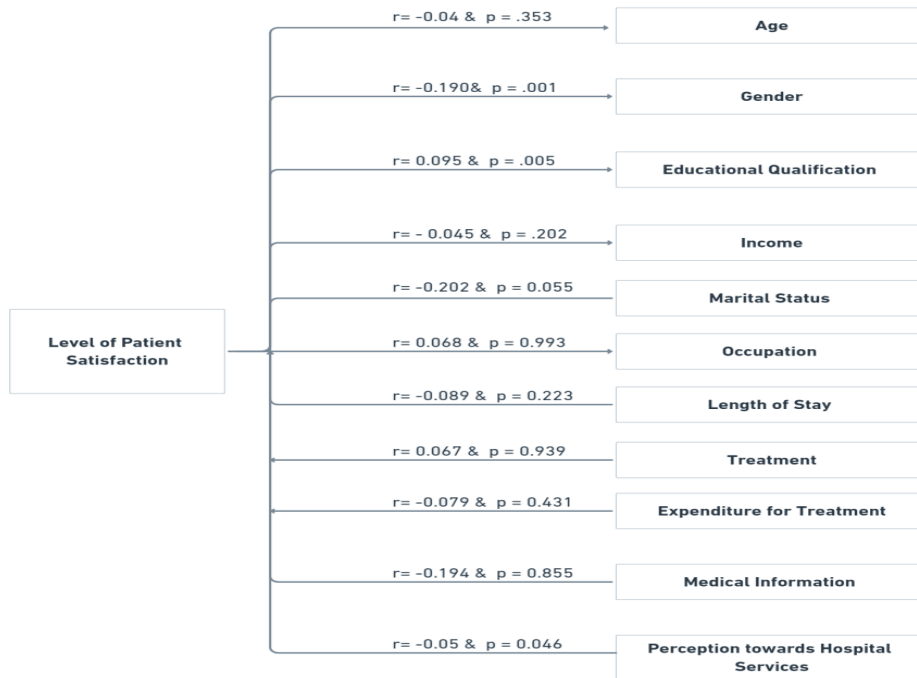
- H₀₁: There is no significant association between the age group, gender, educational qualification, income, marital status, occupation, length of stay, treatment, expenditure and medical information, and overall patients' level of satisfaction towards private medical colleges in Thrissur, Kerala.
- H₀₂: There is no significant difference between the age group, gender, educational qualification, income, marital status, occupation, length of stay, treatment, expenditure and medical information, and overall patient perception towards private medical colleges in Thrissur, Kerala.

4. Methodology and Data Analysis

In this study, the researcher selected private medical college hospitals to evaluate patient satisfaction and service quality. These institutions were chosen due to their significant role in the healthcare sector, especially in regions like Thrissur, where private hospitals are often preferred for their advanced facilities and specialized care.

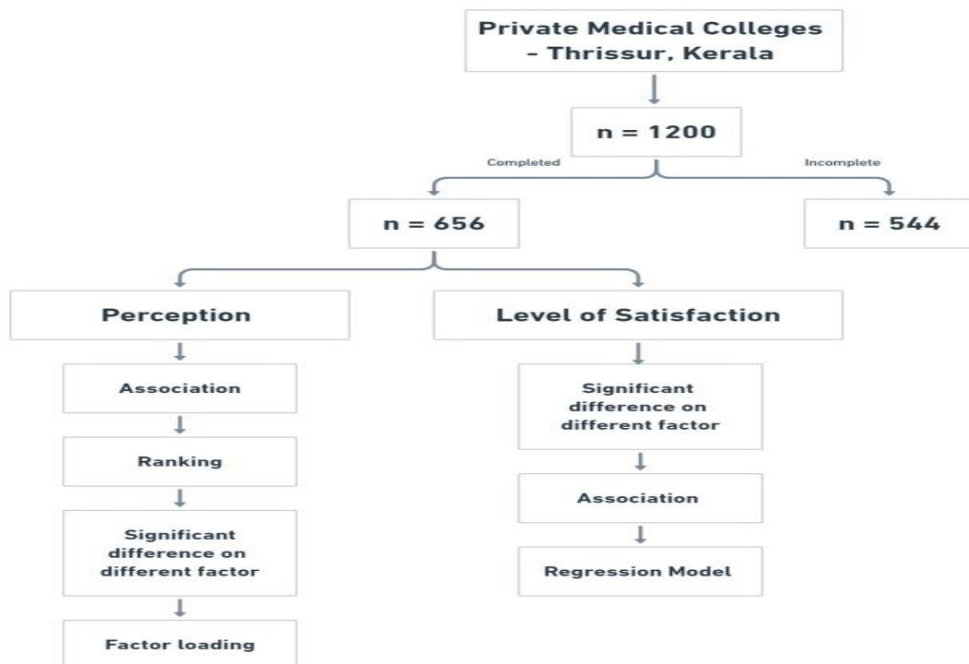
To ensure a comprehensive analysis, the study employed a range of statistical tools, including simple percentage analysis, Analysis of Variance (ANOVA), independent 't' test, Chi-square test, Correlation, Regression, Step-wise regression, Weighted Average Rank Test, Garrett Ranking, and Factor Analysis.

Figure 1. Conceptual Model



Source: Own study.

Figure 2. Data Distribution



Source: Own study.

These methods were utilized to extract meaningful insights from the collected data, which encompassed various demographic, socioeconomic, and service-related variables. The use of multiple statistical techniques allowed for a robust examination of the data, identifying key factors that influence patient satisfaction and service quality perceptions.

For instance, ANOVA helped determine the differences in satisfaction levels across different patient groups, while regression analysis provided insights into the relationship between service quality dimensions and overall satisfaction. Through this multifaceted approach, the study aimed to uncover the underlying dynamics that drive patient preferences, particularly in the context of private medical college hospitals.

Table 1. Reliability of Patient's response

Cronbach's Alpha	Cronbach's alpha-based on Standardised items
0.876	0.877

Source: Own study.

Table 2. Factors associated with Perception and Satisfaction

Factors	Level of Satisfaction				Perception on Service Quality		
	Low	Moderate	High	P Value	Number s	Percent age	P Value
Age (Years)							
Below 20	11(-23.9)	28(-60.9)	7(-15.2)	0.214	46	7	0.803, b
21 – 40	33(-18.2)	128(-70.7)	20(-11)		181	27.6	
41 – 60	51(-14.8)	248(-71.9)	46(-13.3)		345	52.6	
Above 60	22(-26.2)	52(-61.9)	10(-11.9)		84	12.8	
Gender							
Male	99(-16.4)	424(-70.1)	82(-13.6)	0.001*	605	92.2	0.082, a
Female	18(-35.3)	32(-62.7)	1(-2)		51	7.8	
Educational Qualification							
Illiterate	12(-33.3)	19(-52.8)	5(-13.9)	0.000*	36	5.5	0.000*,b
Primary & Secondary	24(-34.8)	39(-56.5)	6(-8.7)		69	10.5	
Graduates	66(-13.2)	367(-73.5)	66(-13.2)		499	76.1	
Masters & Above	15(-28.8)	31(-59.6)	6(-11.5)		52	7.9	
Income (Rs.)							
Below 15000	14(-13.6)	75(-72.8)	14(-13.6)	0.527	103	15.7	0.66,b
15001-25000	12(-18.5)	49(-75.4)	4(-6.2)		65	9.9	
25001-50000	9(-13.8)	48(-73.8)	8(-12.3)		65	9.9	
50001-75000	30(-20.4)	101(-68.7)	16(-10.9)		147	22.4	
Above 75000					276	42.1	
Marital Status							
Married with Children	97(-16)	430(-70.7)	81(-13.3)	0.000*	608	92.7	0.002*,a
Married without Children	20(-41.7)	26(-54.2)	2(-4.2)		48	7.3	
Occupation							
Working	4(-7.8)	35(-68.6)	12(-23.5)	0.000*	51	7.8	0.047*
Business	2(-5.9)	26(-76.5)	6(-17.6)		34	5.2	
Housewife	54(-33.5)	94(-58.4)	13(-8.1)		161	24.5	
Student	19(-22.9)	47(-56.6)	17(-20.5)		83	12.7	

Professional	38(-11.6)	254(-77.7)	35(-10.7)		327	49.8	
Length of Stay							
1 Day	2(-3.9)	38(-74.5)	11(-21.6)	0.019*	51	7.8	0.000*,b
1-3 Days	13(-25.5)	34(-66.7)	4(-7.8)		51	7.8	
Above 3 Days	102(-18.4)	384(-69.3)	68(-12.3)		554	84.5	
Treatment							
General				0.000*	52	7.9	0.244,b
Checkup	4(-7.7)	36(-69.2)	12(-23.1)		32	4.9	
Fever	1(-3.1)	25(-78.1)	6(-18.8)		164	25	
Cardio Related	55(-33.5)	96(-58.5)	13(-7.9)		82	12.5	
Gynaec Related	19(-23.2)	46(-56.1)	17(-20.7)		326	49.7	
Ortho	38(-11.7)	253(-77.6)	35(-10.7)				
Expenditure (Rs.)							
Below 5000	2(-3.9)	39(-76.5)	10(-19.6)	0.018*	51	7.8	0.000*,b
5001-10000	13(-28.9)	28(-62.2)	4(-8.9)		45	6.9	
Above 10000	102(-18.2)	389(-69.5)	69(-12.3)		560	85.4	
Medical Information							
Yes	99(-16.1)	433(-70.5)	82(-13.4)	0.000*	614	93.6	0.647,a
No	18(-42.9)	23(-54.8)	1(-2.4)		42	6.4	

Note: H_{01} is tested with Chi-square test at a 5% level of significance

H_{02} is tested with a. Independent sample t-test and b. ANOVA at a 5% level of significance

Source: Own study.

Table 3. Preference towards Private Medical College Hospitals

Point of Purchase	1	2	3	4	5	6	Total	Total Score	Mean Score	Rank
Garret Score	77	63	54	45	36	23				
Proximity to Residence	7	3	91	78	263	214	656	23542	35.89	2
Medical Professionals	12	13	7	37	576	11	656	24775	37.77	1
Friends & Relatives	6	20	4	22	25	579	656	17145	26.14	6
Advertisement Media	12	19	32	142	129	322	656	22289	33.98	4
Ex-patients	15	36	31	146	140	288	656	23331	35.57	3
Free health Camps & Exhibitions	5	8	23	36	32	552	656	17599	26.83	5

Note: Garret ranking method was used to identify the most preference towards Private medical college hospital.

Source: Own study.

Table 4. Patient Satisfaction across various Service Areas in Private Medical College Hospitals

Particular	HS	S	N	DS	HDS	Total	Mean Score	Mean	Rank
Patients Satisfaction towards Registration									
Information Provided on Registration	474	132	47	0	3	656	3042	4.64	3
Waiting time in Registration	562	6	85	3	0	656	3095	4.72	2
Formalities in Registration	656	0	0	0	0	656	3280	5	1
Approach of the Receptionist	392	181	42	0	41	656	2851	4.35	4
Patients Satisfaction towards Diagnosing									
Time taken in Consultation	656	0	0	0	0	656	3280	5	1
Answering the Quires	538	74	38	6	0	656	3112	4.74	5

promptly									
Counseling by the doctors	642	0	12	2	0	656	3250	4.95	4
Explanation given for ailment	647	3	6	0	0	656	3265	4.98	2
Approach of the doctors	616	28	12	0	0	656	3228	4.92	3
Patients Satisfaction towards Nursing									
Approach of the nurses	656	0	0	0	0	656	3280	5	1
Assistance	518	118	20	0	0	656	3122	4.76	5
Instance by the nurses	641	12	3	0	0	656	3262	4.97	2
Medication given by the staff nurses	623	27	6	0	0	656	3241	4.94	3
Availability of the nurses	624	20	12	0	0	656	3236	4.93	4
Patients Satisfaction towards Dietary Services									
Hygienic Conditions of the Canteen	486	79	87	2	2	656	3013	4.59	8
Cost of the food	636	12	2	6	0	656	3246	4.95	4
Quality of the food	650	6	0	0	0	656	3274	4.99	2
Quantity of the food	522	96	32	6	0	656	3102	4.73	7
Taste	656	0	0	0	0	656	3280	5	1
Freshness	644	6	6	0	0	656	3262	4.97	3
Room Services	624	20	12	0	0	656	3236	4.93	5
Delivery time	482	76	73	20	5	656	2978	4.54	9
Provision for dietetic food	656	0	0	0	0	656	3280	5	1
Staff serving food	626	15	6	9	0	656	3226	4.92	6
Patients Satisfaction towards Lab Equipment Services									
Availability of latest technology	593	42	21	0	0	656	3196	4.87	1
Waiting time	488	156	0	9	3	656	3085	4.7	3
Cost of Services	557	90	6	3	0	656	3169	4.83	2
Time Consumed for report	448	163	30	13	2	656	3010	4.59	4
Response by Staff in-charge	105	477	60	14	0	656	2641	4.03	5
Staff availability	76	161	32 0	77	22	656	2160	3.29	6
Patients Satisfaction towards Emergency Services									
Response of the doctor at emergency	626	15	6	6	3	656	3223	4.91	3
Explanation about Patients	530	108	18	0	0	656	3136	4.78	4
Speed of Work	635	15	6	0	0	656	3253	4.96	1
Formalities for Registration	614	30	12	0	0	656	3226	4.92	2
Space availability for intensive care	606	38	12	0	0	656	3218	4.91	3
Availability of specialist	101	475	60	17	3	656	2622	4	5
Patients Satisfaction towards Infrastructural Facilities									
Availability of the Rooms	530	108	18	0	0	656	3136	4.78	6
Cleanliness of floors	626	15	6	6	3	656	3223	4.91	3
Sanitation of the hospital	626	21	9	0	0	656	3241	4.94	2
Hygienic condition of the rooms	577	54	25	0	0	656	3176	4.84	4
Ventilation of the rooms	552	89	15	0	0	656	3161	4.82	5
Drinking water facility	530	108	18	0	0	656	3136	4.78	6
Provisions for rooms	636	15	5	0	0	656	3255	4.96	1
Provisions for security	171	459	23	3	0	656	2766	4.22	7

Patients Satisfaction towards Medical Store Facilities									
Availability of medical store service	593	42	21	0	0	656	3196	4.87	1
Cost of medical store service	478	154	12	9	3	656	3063	4.67	3
Cost of medicine	567	80	6	3	0	656	3179	4.85	2
Quickness in service	445	170	31	8	2	656	3016	4.6	4
Availability of staff	101	475	60	17	3	656	2622	4	5
Patients preference	79	151	$\frac{32}{7}$	77	22	656	2156	3.29	6

Note: The weighted average score is used to check the level of satisfaction with various parameters of Private medical college hospitals.

Source: Own study.

Table 5. Kaiser-Meyer-Olkin Measure of Sampling Adequacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.864
Bartlett's Test of Sphericity	Approx. Chi-Square
	df
	231
	Sig.
	0.000

Source: Own study.

Table 6. Factor Analysis Results for Hospital Service Quality

Factors	1	2	3	4	5
Offers prompt service every time	0.948				
Cleanliness and Hygiene are excellent	0.948				
Medical reports are accurate	0.933				
Hospital's personnel appear neat	0.932				
Use of modern technology in services	0.917				
Provide adequate information about my medical condition	0.887				
Hospital has up-to-date equipment	0.825				
Willing to help patients		0.891			
Administration staff were efficient in dealing with my queries		0.77			
Experienced personnel on duty on weekends		0.767			
Employees are caring		0.746			
Employees are courteous at all items		0.731			
Administration staff were efficient in dealing with my queries					
Giving individualized medical attention			0.784		
Staff is pleasant to deal with			0.749		
Use of proficient medical staff			0.729		
Understanding towards my feelings of discomfort			0.711		
Offers convenient times to use their hospital services			0.665		

Provide the services as promised				0.803	
Employees always respected my privacy				0.794	
Obtain feedback from patients					0.786
Employees informed me exactly when services would be performed					
Eigen Values	10.33	2.984	1.638	1.367	1.089
% of Variance	46.953	13.565	7.447	6.215	4.948
Cumulative % of Variance	46.953	60.518	67.966	74.181	79.129

Source: Own study.

Table 7. Distribution of Patient Satisfaction Levels by Perception towards Hospital Services

Perception towards Hospital Services	Level of Satisfaction			Total	P Value
	Low	Moderate	High		
Low	30(-31.9)	62(-66)	2(-2.1)	94(100.0))	0.000*
Moderate	4(-4.6)	72(-82.8)	11(-12.6)	87(100.0))	
High	83(-17.5)	322(-67.8)	70(-14.7)	475(100.0))	
Total	117	456	83	656	

Note: *significant associated with p value 0.000 less than 5 % level of significance using chi square test.

Source: Own study.

Table 8. Regression Analysis of Factors Influencing Patient Satisfaction

Variables	Regression coefficient	Standard error	t	Sig
Age	-0.093	0.1	-0.929	0.353
Gender	-1.080**	0.311	-3.476	0.001*
Educational Qualification	0.356**	0.125	2.847	0.005*
Income	-0.067	0.052	-1.276	0.202
Marital Status	-1.412	0.733	-1.926	0.055
Occupation	-0.007	0.762	-0.009	0.993
Length of Stay	-0.773	0.634	-1.219	0.223
Treatment	0.059	0.761	0.077	0.939
Expenditure for Treatment	0.506	0.642	0.788	0.431
Medical Information	0.143	0.785	0.183	0.855
Perception towards Hospital Services	0.021**	0.01	1.999	0.046*

Constant 99.465
 Std. Error of Estimate 1.230
 R² 0.088**

Note: The regression equation is usually of the form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

- Y: Dependent variable
- β_0 : Intercept (the value of YYY when all XXXs are 0)
- β_i : Coefficients for the independent variables ($X_i X_i$)
- ϵ : Error term

Source: Own study.

5. Results

The test results in Table 1 shows the Cronbach's Alpha value of 0.876 and 0.877, based on raw data and standardized items, indicates high internal consistency and reliability. This minimal difference suggests well-standardized data, supporting the validity of the data and robustness of the study's conclusions.

The test results in Table 2 shows the impact of demographic and socioeconomic factors on patient satisfaction and service quality perception in private medical college hospitals. Key observations include age, gender, education, income, marital status, and occupation, length of stay, treatment type, expenditure, and medical information. Age and gender vary, but not significantly. Education significantly affects satisfaction and perception, while income does not. Married patients with children report higher satisfaction and service quality perception.

The test results in Table 3 shows the factors influencing patients' choice of point of purchase in private medical college hospitals, ranked by their importance using Garrett Scores. The analysis reveals that "Medical Professionals" is the most influential factor, achieving the highest total score (24,775) and a mean score of 37.77, ranking it first. "Proximity to Residence" ranks second with a mean score of 35.89, followed by "Ex-patients" in third place (mean score 35.57). "Advertisement Media" ranks fourth, while "Free Health Camps & Exhibitions" and "Friends & Relatives" are less influential, ranking fifth and sixth respectively.

The test results in Table 4 shows the patient satisfaction in various service areas in private medical college hospitals. Formalities in registration, consultation time, nursing approach, dietetic food, lab equipment services, emergency services, infrastructure facilities, and medical store facilities are the most satisfied. However, staff availability is a concern. Overall, patients are satisfied with registration, diagnosing, nursing, and dietary services, but lab services and infrastructure need improvement.

The test results in Table 5 shows the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy indicates high sampling adequacy for factor analysis, with a KMO value above 0.80. Bartlett's Test of Sphericity confirms the correlation matrix's significant difference from an identity matrix, indicating the data's factorability and the potential to reveal meaningful underlying factors.

The test results in Table 6 shows the analysis of factors in a survey reveals a strong relationship between key items such as prompt service, cleanliness and hygiene, medical reports, and hospital personnel. The first factor, with an eigenvalue of 10.33, accounts for 46.953% of the total variance, followed by the second factor, which accounts for 13.565% and the third factor, which accounts for 7.447%. The first five factors collectively account for 79.129% of the total variance. These factors

effectively summarize the data, highlighting aspects like service quality, technology, employee behavior, and administrative efficiency.

The test results in Table 7 shows the satisfaction levels across perceptions of hospital services. Low perception results in 31.9% satisfaction, moderate satisfaction (82.8%), and high satisfaction (14.7%) among patients. A significant relationship exists between perceptions and satisfaction levels, with a p-value of 0.000* indicating a strong correlation.

The test results in Table 8 shows the regression analysis found no significant impact of age, gender, educational qualifications, income, marital status, occupation, length of stay, treatment, expenditure for treatment, medical information, or perception towards hospital services on patient satisfaction. However, higher educational qualifications and better income levels were associated with higher satisfaction. The model explains 8.8% of the variance in patient satisfaction.

6. Discussion and Implications

The study focuses on patient demographics and satisfaction in private medical college hospitals. Most patients are male professionals aged 41-60, with higher education, a monthly income over Rs. 75,000, and have spent over three years in hospitals for orthopedic treatments, incurring medical expenses exceeding Rs. 10,000. They value the availability of experienced medical professionals and the convenience of hospital locations.

Factor analysis reveals that these hospitals are praised for their prompt services, clean and hygienic environments, accurate diagnoses, and modern medical equipment. Patient satisfaction is influenced by various factors including age, gender, education, income, marital status, and treatment specifics. Notably, patients who feel that doctors are transparent and willing to share medical information exhibit higher satisfaction levels.

The weighted average rank test shows satisfaction with registration processes, consultation waiting times, and the approach of hospital staff, including nurses and receptionists. Patients also appreciate the quality of food, technological advancements, and medical store services. However, concerns persist regarding staff availability and lab services.

The study indicates that patient satisfaction is significantly affected by educational qualifications, with higher satisfaction reported among educated, married patients with children. The choice of healthcare providers heavily relies on the quality of medical professionals. Despite generally high satisfaction across various service areas, improvements are needed, particularly in staff availability and lab services. The study underscores the importance of managing patient perceptions and focusing on demographic factors to enhance overall satisfaction and service quality in private

medical college hospitals. Effective communication and targeted service improvements are crucial for meeting patient expectations and fostering positive healthcare experiences.

7. Theoretical Implications

The study supports the validity of established service quality frameworks in healthcare, such as SERVQUAL and SERVPERF models, in measuring service quality and patient satisfaction in private medical college hospitals. It emphasizes the role of demographic and socioeconomic variables in understanding patient satisfaction, with educational qualifications significantly impacting satisfaction levels.

The study also highlights the correlation between patient perceptions and satisfaction levels, highlighting the need for healthcare providers to manage and enhance these perceptions effectively. Factor analysis insights reveal key factors influencing patient satisfaction, such as prompt service, cleanliness, and modern technology. However, the study's regression analysis reveals only 8.8% of the variance in patient satisfaction is explained by the model, suggesting the need for more comprehensive theoretical models. The study also uses Garrett's ranking technique to identify key factors influencing patient choice of healthcare providers.

8. Practical Implications

The study suggests that hospitals should focus on improving service quality, communication, facility upgrades, and staff management to enhance patient satisfaction and loyalty. This includes improving prompt service, cleanliness, modern technology, and the neatness of personnel. Healthcare providers should tailor communication strategies to different educational levels, providing clear, detailed information and understanding medical conditions and treatment plans.

Investing in training programs for medical and administrative staff can also improve communication skills and efficiency. Resource allocation should be optimized, with medical professionals and proximity to residence being key factors. Open communication and transparency can foster better patient-doctor relationships. Facility upgrades should be prioritized, staff availability should be improved, and targeted marketing and outreach should be implemented. Continuous improvement initiatives based on feedback can also enhance service quality and patient satisfaction.

9. Limitations and Scope for Future Research

The study's sample size is limited to patients from private medical college hospitals, which may not represent the broader population. The cross-sectional design provides a snapshot of patient satisfaction at a single point in time, but future research could

include a more diverse sample. The data is based on self-reported surveys, which may be subject to biases. The study's focus on specific factors and variables may limit its applicability to other regions or cultures.

Additionally, the study lacks qualitative insights. Future research should compare patient satisfaction across different healthcare facilities, conduct longitudinal studies to track changes over time, and incorporate additional variables like patient health conditions and psychological factors. Studying regional and cultural variations can help develop tailored strategies for improving patient satisfaction.

Combining quantitative and qualitative methods can provide deeper insights. Technological advancements and staff training can also impact patient satisfaction. Understanding internal factors like organizational culture and management practices can help hospitals implement effective strategies for improving service quality. Studying patient-centered care models can also provide best practices for enhancing patient experience.

10. Conclusions

Patients experiencing fever or spending over Rs.10, 000 on medical expenses often have lower perceptions of hospital services. To improve patient satisfaction, hospitals should implement strategies such as reducing unnecessary tests and hidden charges to ease financial burdens and build trust. Special attention should be given to married patients without children to ensure they receive empathetic care.

Additionally, educational programs for housewives can help them better understand healthcare options, enhancing their experience. For cardiovascular patients, high-quality care must be provided without excessive charges. Hospital staff should be vigilant, ethical, and compassionate, adhering to guidelines and maintaining loyalty to patients and the organization.

Engaging with the Public Relations Office (PRO) and other departments can help patient's access accurate information and set realistic expectations. Recognizing the human aspect of healthcare providers can foster understanding and empathy. In conclusion, hospitals are crucial for saving lives and promoting well-being.

The healthcare industry should strive to offer exceptional, patient-centered care that addresses both medical and emotional needs. While there are areas for improvement, acknowledging the many positive outcomes and focusing on compassion can enhance the overall effectiveness of healthcare services.

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